

# A CASE FOR INTERNATIONAL COOPERATIVE ACQUISITIONS *LESSONS FROM DEVELOPING AND EXECUTING A SECTION 27 “QUAYLE” AUTHORITY PROGRAM*

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This article sets out international cooperative program lessons that were learned from interviewing 29 past and present stakeholders from the United Kingdom Ministry of Defence, U.S. industry, U.S. government agencies, and joint program office personnel. Not surprisingly, the lessons learned suggest that devoting enormous energy and focus toward understanding each other's frames of reference and perspectives; striving to work together; establishing a well-defined, common requirement up front; and continuous senior-level support are factors critical to success in an international cooperative acquisition environment. We conclude with an evaluation of the program's organizational character.

**I**n the spirit of maintaining past Secretary of Defense William Perry's strong advocacy for developing cooperative acquisition programs with our European allies, current Secretary of Defense William Cohen's March 1997 policy directive states, in part, that at the minimum the U.S. military must "leverage U.S. resources through cost sharing and economies of scale afforded by international cooperative research, development, production, and logistics support

programs." In this article we present and discuss several lessons learned from an international cooperative acquisition—initiated in 1993—that largely achieves the objectives of Secretaries Perry and Cohen.

We note that D'Agostino (1996) evaluated and compared two multinational weapons development efforts, identifying multinational political and management issues that exacerbated technical and schedule problems. She described risk areas as including:

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- number of countries and industries;
- differing and excessive requirements;
- complex cost share and technical work share decisions;
- consortia versus prime contractors; and
- international program office staffing and decision-making.

Our research, more focused in nature, complements, amplifies, and adds to her conclusions through identifying issues related to program establishment and management. While an acknowledged D'Agostino research limitation was the lack of a successful program—she based her findings on a canceled program and a new program—we studied an ongoing program that, notwithstanding schedule challenges, appears successful, despite the real and perceived barriers and risks encountered.

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## THE PROGRAM

The AN/AAQ-24 Directional Infrared Countermeasures (DIRCM) program is one of the U.S. Special Operations Command's (USSOCOM's) highest priority acquisition programs. This urgently needed aircraft self-protection suite will provide fast and accurate threat detection,

processing, tracking, and countermeasures to defeat current and future generation infrared missile threats. DIRCM is designed for installation on a wide range of rotary and fixed-wing aircraft. For USSOCOM, the system will be installed on all of Air Force Special Operations Command's (AFSOCS's) AC-130 gunships and MC-130 *Combat Talon* aircraft. Growth to counter more sophisticated threats is incorporated into the program by providing a path that allows for direct insertion of a laser-based countermeasure when an all-band laser is developed. These capabilities made the DIRCM system, and others like it, strong candidates during USSOCOM's initial evaluation of the options available.

After careful consideration of the alternatives, USSOCOM initiated the DIRCM program as a cooperative acquisition with the United Kingdom Ministry of Defence (U.K. MoD) under Section 27 of the Arms Export Control Act (AECA) ("Quayle" Authority). Section 27 of the AECA authorizes the Department of Defense (DoD) to enter into cooperative projects with allies and friendly countries for cooperative research, development, test, and evaluation (RDT&E) or joint production (including follow-on support) of defense articles, concurrent production of a defense article that was jointly developed by the United States and allied or friendly countries, or U.S. procurement of a defense article or service from an allied or friendly country.

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“Quayle” Authority (Section 2350b) enables DoD to waive certain contracting and procurement requirements in carrying out contracts under a Section 27 cooperative project.

Prior to program inception, the two countries’ procurement and legal staffs developed and negotiated an acceptable Memorandum of Understanding (MOU). Given the program’s urgency and a strong desire on the part of the participants to establish a firm foundation for the program’s success, both staffs felt the best means to keep the negotiations on track was to leave out politically charged items such as cost and work share arrangements. Within the framework of the “Quayle” Authority, the DIRCM MOU allows the U.K. MoD to competitively award a contract on behalf of USSOCOM. The U.K. MoD owns and manages the contract with the DIRCM prime contractor, Northrop Grumman Electronics and Systems Integration International, Inc., (NGESII) Rolling Meadows, IL.

The DIRCM program is unusual in that it is one of the first cooperative development and production projects undertaken by a U.S. agency wherein the allied country owns the contract with industry. In addition, it may be the first program where the U.K. MoD has led a collaborative procurement with the United States in which the prime contractor is one of the major U.S. defense contractors.

Total U.S. programmatic cost savings, documented in the program’s 1996 David Packard Acquisition Excellence Award narrative, amount to \$80 million.

## **OVERVIEW OF DIRCM PROGRAM MANAGEMENT**

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As noted, the U.K. MoD owns and manages the DIRCM contract, currently valued at over \$400 million for joint U.K./USSOCOM content as well as United Kingdom- and USSOCOM-unique requirements. The contract is to develop, produce, install, field, and sustain approximately 131 DIRCM systems on the U.K. fixed- and rotary-wing fleet and 59 systems on the AFSOC AC/MC-130 fleet.

The fixed-price (FP) basic contract, awarded under a total systems performance responsibility (TSPR) philosophy, is for the joint engineering, manufacturing, and develop-

ment (EMD) phase and U.K. production and sustainment phases, and includes priced options for USSOCOM’s production and sustainment phases. The MOU to enter into a cooperative program between the United States and the United Kingdom was signed in June 1994 and the EMD contract with Northrop Grumman was signed in March 1995.

The DIRCM program manager is a U.K. Ministry of Defence (MoD) civilian. There are U.S. and U.K. joint program offices (JPOs), with each office headed by a deputy joint program manager (DJPM). The USSOCOM JPO at MacDill Air Force Base, FL, is staffed by a handful of military and civilian managers, augmented

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by a team of contractor technical support personnel. The MoD JPO in Bristol, England, is staffed by several full-time U.K. civil servant managers and one USSOCOM civil servant, augmented by off-site specialized engineering support. The U.K. program manager is co-located with his U.K. deputy in Bristol. In addition, the United Kingdom has placed an Integrated Logistics Support (ILS) manager on-site at the prime contractor. A steering committee comprises U.K. and U.S. acquisition executives (Figure 1).

In addition to providing functional (engineering, test, ILS, software, etc.) consultation to the U.K. program manager, USSOCOM is responsible for managing program-wide developmental testing at

U.S. test facilities such as the Air Force Electronic Warfare Evaluation Simulator (AFEWES), Army Research Laboratory (ARL), Eglin Air Force Base test ranges, and the White Sands Missile Range Aerial Cable Facility. USSOCOM also assists in the execution of that portion of the contract to outfit the Air Force Special Operations Command (AFSOC) AC/MC-130 fleet with DIRCM systems. The USSOCOM JPO is managed through a two-tier integrated product team (IPT) structure, with U.K. and prime contractor representation in the upper tier. These IPTs draw extensively on Service and OSD expertise in the areas of engineering, test, logistics, and aircraft integration. Presently the program is in the latter stages of

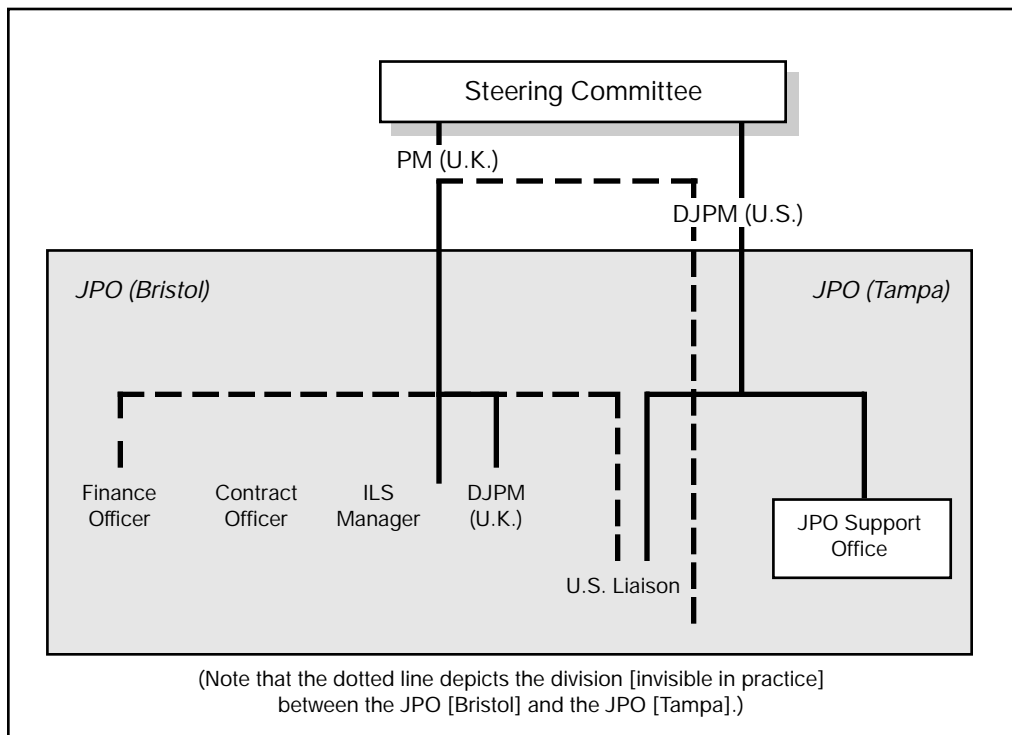


Figure 1. The Steering Committee for the Joint Program

EMD, with production scheduled to start in 1998.

## **DATA SOURCES AND RESEARCH PURPOSE**

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The sources of research data for this study were program documentation and individual interviews with 29 key decision makers, stakeholders, managers, and functional experts substantially affecting the DIRCM program, past and present. In addition to a semi-structured interview format designed to gather programmatic and technical data, interviewees were asked what lessons they learned (and related observations) from their involvement in the DIRCM program. We generally conducted the interviews in the home office of interviewees or in a neutral setting. The research purpose was to document DIRCM's experience in the form of lessons learned. In particular, we wished to share the program's Section 27 "Quayle" Authority successes and shortcomings with future international cooperative programs.

## **LESSONS LEARNED**

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Summarized Section 27 and related lessons learned, and the associated rationale for these experiences, are categorized as follows:

- drafting and negotiating the MOU;
- defining the requirement;
- cross-cultural communications and teamwork;

- personalities, professional skill sets, and motivation;
- writing, negotiating, and executing the contract;
- TSPR/FP-type contracting;
- management continuity;
- contractor program management support;
- IPT management; and
- leadership.

## **DRAFTING AND NEGOTIATING THE MOU**

**Lesson:** When contemplating a Section 27 program, seek Service headquarters or OSD assistance and sponsorship.

**Rationale:** The first USSOCOM DIRCM program manager learned from OSD officials at a very early stage that if he worked the MOU procedures himself through USSOCOM channels, the MOU process could take 18–24 months rather than the 6–8 months he could afford for AFSOC's urgent requirement. No Section 27 "Quayle" Authority (the allied country is the procurement agent) codevelopment, coproduction procurement had been seriously contemplated before; USSOCOM would have had to develop the documentation internally and staff it through the Joint Staff and the cognizant Services. He asked a key OSD mid-level acquisition official for help and received it. The OSD official and the U.K. program manager said that direct senior executive involvement would be very helpful in expediting the MOU process. The USSOCOM acquisition executive (AE),

an innovator in tailored acquisition, made supporting calls for cooperation to OSD and U.K. MoD acquisition executives. This direct high-level support from the beginning also sent a powerful message to the United Kingdom that USSOCOM was seriously interested in a cooperative effort.

**Lesson:** Enlist experienced negotiators to help negotiate the MOU.

**Rationale:** Allied countries have professional negotiators who consistently outperform less experienced U.S. negotiating teams. The Defense Security Assistance Agency (DSAA) General Counsel, who helped negotiate the DIRCM MOU, suggests that the U.S. defense establishment should not “send a boy out to do a man’s work. [We] need to send out on a negotiating team experienced people who ‘know how to/been there/done that.’” The skilled OSD-led negotiating team was very successful in achieving USSOCOM’s objectives. Equally significant, the team completed the negotiations in the very

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short period of a week and with very little acrimony (which could have seriously jeopardized long-term relationships on the program). (Note: The au-

thors recognize DSMC’s international management training courses. One, Alan Childress, is a graduate of the Advanced International Management Workshop and highly recommends that training to anyone contemplating international cooperative acquisitions.)

## DEFINING THE REQUIREMENT

**Lesson:** A well-defined, focused requirement that includes a commonality of interest is essential for success. Both sides must strongly desire to do the same thing.

**Rationale:** In the early stages of forming the partnership, the U.S. and U.K. program managers encountered several obstacles, some caused by cultural differences and baggage from earlier unrelated attempts at cooperative efforts that had failed. These obstacles could have easily threatened collaboration. The significant savings in time and money was very important to collaborating; however, the goal of defeating a similar list of threats under like scenarios of operation was the common thread that secured, and continues to secure, the partnership. The interviewees advise future program managers to acknowledge and value differences while working hard toward mutually beneficial solutions and avoiding compromises that dilute the objectives of one of more of the parties.

**Lesson:** Section 27 works best if, in addition to a common requirement, the partnership is formed from the bottom up.

**Rationale:** Early in the program, the U.S. DIRCM managers discovered there were common U.S. and U.K. requirements they could merge for joint execution. Both countries were in formal stages of going forward with similar needs. When U.S. program-level officers approached the U.K. program manager and his deputy with congruent requirements, as well as resources, they saw that a good marriage was possible. As a result, combining the efforts was approved all the way up the chain. In contrasting cases, according to former DSAA General Counsel Susan

Ludlow-MacMurray, both countries already had their own programs ongoing when they were directed from the top, politically, to merge, which caused dilution of authority and responsibility and dissatisfaction in one or both sides' management. She suggests that international programs driven by bottom-up motivation generally succeed. Those programs that emanate from the top down (Service Secretary or OSD level) generally do not succeed; they die from lack of a mid-level buy-in or sponsorship.

#### **CROSS-CULTURAL COMMUNICATIONS AND TEAMWORK**

**Lesson:** Approach a potential international cooperative acquisition partner with a very small team of highly skilled people and plan to agree to limit the number of U.S. program staff participants directly involved in program startup and execution.

**Rationale:** The British were apprehensive that a large, Service-level program would attempt to subsume their ongoing program once a cooperative agreement was in place. They made this point clearly and pointed out past examples of failed efforts when approached by the U.S. team. Their primary concern was that of losing control and the focus of meetings if attended by a large U.S. contingent. They clearly stated they would pull out of an agreement if the United States attempted to modify their schedule or could not accept junior partner status. After a few meetings, they saw that the USSOCOM organization was relatively small and agile and, like them, embraced acquisition streamlining.

**Lesson:** Each side in an international cooperative program must dedicate an enormous effort to understand the culture, motivations, and idiosyncrasies of the people and bureaucracies of the other country.

**Rationale:** U.K. interviewees emphasized that realizing the magnitude of cultural differences was quite a shock. The first U.K. DJPM said working together on this program illustrates the true meaning of the concept of "two countries divided by a common language." He recommends taking a gloves-off approach and telling each other clearly and openly how issues are being viewed, or be prepared to suffer the consequence of miscommunication. Two U.K. interviewees stated that commitment from

senior management on both sides is an absolute requirement to allow enough interchange between the people doing the job. They are not sure there had been sufficient

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senior management emphasis on the DIRCM project to achieve the level of cooperation that might have been. In particular, they feel senior managers might have committed more travel resources to allow this interchange.

U.S. interviewees suggest that a U.S. DJPM must, at times, look at things through the eyes of his or her counterpart to understand the other's point of view. For example, a U.S. DJPM had a difficult time agreeing with his counterpart on an



accurate assessment of the program's schedule. In his eyes the program had slipped a considerable amount, on the order of 12 months. The U.K. DJPM maintained just as strongly that the program had hardly slipped at all, maybe one or two months. After having this disagreement in

"Two British interviewees commented on the synergism realized from international cooperation."

front of the respective acquisition executives, the U.S. DJPM came to realize the British typically measured pro-

grams in relation to the end date of the contract, while the United States typically uses initial operational capability, or when the system first makes it to the field. In the U.S. case, the initial operational capability had slipped 12 months, but the contractor was able to adjust production and installation scenarios to maintain the same contract end date. Essentially, both DJPMs were right, locked in violent agreement. They just did not know it.

**Lesson:** When assigning functional expertise, U.S. program managers should strive to achieve a synergistic balance with other participants' team members. By drawing on key areas of expertise from each country while trying to avoid too much overlap (and high potential for personal competition and conflict), the overall team will be more effective and agile.

**Rationale:** Two British interviewees commented on the synergism realized from international cooperation. One suggested that while either side would have done a grand job on its own, "the fact that (the technicians) know how to bounce things off each other has been a great

benefit; we should keep that well in our sights...and on the management side there are differences in approach, which, pooled together, benefit both parties." DIRCM's MoD executive, John Allen, noted that "no doubt USSOCOM has a better knowledge of both U.S. industry generally and Northrop in particular. Both sets of experience brought to manage one particular contract is working well...Northrop Grumman knows that USSOCOM is a better-informed customer than we are...we can draw from that experience." A Northrop senior manager commented that the integration of U.K., USSOCOM, and Northrop technical specialists "has been outstanding...benefits to the United Kingdom and United States in operating that way are tremendous. I can't over-stress that." DIRCM's program manager argues that from the collaboration he is "absolutely committed that we are both getting a better product out of this."

#### **PERSONALITIES, PROFESSIONAL SKILL SETS, AND MOTIVATION**

**Lesson:** When contemplating the formation of an acquisition partnership with a potential international partner, U.S. agencies should recruit or place their most technically competent, strongest personalities in the initial contact and management teams.

**Rationale:** U.K. program officers remarked that they were very impressed, particularly in the early stages of forming the DIRCM partnership, by the personalities, drive, and desire to succeed of the founding U.S. program team members. They suggest the marriage probably would not have happened without the intense interest of an OSD supporting official, or the doggedness of the first DJPM to "make

it happen.” The British look hard at personalities when contemplating a business relationship. The USSOCOM AE, Gary Smith, was seen as an acquisition innovator with whom they could do business.

**Lesson:** U.S. decision makers should implement a deliberate personnel policy to hire or place and retain the best program management and technical skill sets available for Section 27 programs. In addition, executives should attempt to recruit personnel with international cooperative acquisition training and experience (see Lesson 1, Drafting the MOU).

**Rationale:** The U.S. AE’s placement of management personalities and overlapping skill sets is a positive lesson. The first DJPM was a contracting officer, acquisition professional, and operator. The second DJPM’s background was operations and acquisition. The current DJPM is an acquisition professional, while the support contractor technical director has an operational and acquisition professional background with experience as a program manager in industry. First-rate technical professionals were hired to support these managers. The U.K. program manager professed he is understanding of the fact that U.S. personnel must learn his way of doing business as well as sustaining U.S. policies and procedures.

**Lesson:** When entering into an acquisition partnership where the other country owns the contract with industry, the U.S. side must be prepared to accept a subordinate management role.

**Rationale:** U.K. and Northrop Grumman officials point out the positive effect on the relationship resulting from

USSOCOM team recognition, from the outset, that DIRCM would be a U.K. contract. The first U.K. program manager made it clear early in the project that he was the program manager, that he called the shots, and that the contract terms were United Kingdom terms, not those of the United States. When the first and second U.S. DJPMs were in London during the contract negotiation process, they worked with the U.K. program manager and did not try to lead him. A good illustration of this lesson is told by Northrop’s contracting director. He was attending a briefing by the U.K. program manager, sitting behind the overlapping U.S. DJPMs during their changeover phase. He said the second U.S. DJPM (then-Lt Col Karl “Chip” Kochel) turned to his predecessor (Lt Col Jim Pennock) and asked a question. Pennock’s reply, as he pointed to the U.K. program manager, was “Ask your program manager.”

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## **WRITING, NEGOTIATING, AND EXECUTING THE CONTRACT**

**Lesson:** When negotiating an allied-led RDT&E TSPR/FP contract with U.S.-based defense firms, the program manager, with the U.S. Deputy DJPM, should meticulously precoordinate the developmental and operational testing terms, conditions, and standards with the appropriate U.S. test agencies.

**Rationale:** The U.K.-owned EMD contract with Northrop Grumman gave Northrop total systems performance responsibility, including developmental testing. The testing program included the use of U.S. Air Force test activities. Differences in test standards, procedures, and philosophy emerged after development

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was under way and have continued to plague the program manager. U.K. interviewees, while admitting that DIRCM

technology presents unanticipated test challenges, argue that there has been a tendency from the U.S. test community to try to run testing as if it were a cost-plus type development contract, when in fact it is a fixed-price contract. Two Northrop Grumman officials suggest that the program manager, with program goals in mind, should have the final word regarding testing. It has not worked out in that manner, causing confusion at times.

**Lesson:** When developing the Section 27 contract with industry, write a U.S.-only portion of the contract to help in obtaining support-system information; tie U.S. payments to contract data requirements list (CDRL) deliveries.

**Rationale:** In cooperative acquisitions, certain elements of the requirement may be unique to each country. For example, U.S. logisticians require product and contract information to establish a cost-effective support infrastructure. Also, the "system" requires them to have a contract number in the U.S.-contract-number format since their software does not

accommodate the contract number format used by some other nations. In addition, contract specifications are generally more unbounded, causing U.S. JPO logisticians a small problem managing compliance, particularly with regard to the CDRLs (contract deliverables). The delivery of data, in some cases, is more important than the product itself.

### TSPR/FP-TYPE CONTRACTING

**Lesson:** When faced with total systems performance responsibility/fixed price (TSPR/FP)-type contracting in a cooperative acquisition, U.S. DJPMs and U.S. contractors should take care to fully understand the concept of TSPR/FP contracting and the pitfalls of execution in the U.S. acquisition environment.

**Rationale:** TSPR/FP contracting is generally not alien to the U.S. acquisition culture; however, for various reasons U.S. agencies tend to drift away from implementing true TSPR, especially during times of technical challenges. At times the temptation for U.S. program managers and their functional team members is too great to resist getting directly involved in "helping" the contractor work through the problems. However, this approach typically ends up with the government performing work or functions that the prime contractor was paid to do while at the same time possibly absolving the contractor of responsibility for failing to perform.

While the United Kingdom fully supports and accepts Northrop Grumman responsibility and judgment on the requirements, the U.S. JPO and Northrop are experiencing problems with U.S. inspection and test agencies acceptance of TSPR. For example, a Northrop Grumman interviewee complains that the Defense

Contracts Auditing Agency is inspecting their Group A component installation on an incremental basis as they deem fit, but Northrop does not have “incremental absorption” to go along with the inspection. Northrop still has, at the end of the program or at the end of the modification, the obligation to present it to the government and the government has the right to accept or reject, even though they agreed on something in the normal course of doing the modification.

An interesting compromise between U.K. and U.S. contract management approaches has emerged in the DIRCM program. The U.S. side introduced a review process to TSPR contracting. The contract is being executed using this review process to help the contractor, but the government does not sign off on formal review documents. In the words of a DJPM, “Northrop performs on the contract and we oversee their performance. If they convince us that it’s great and they are ready for preliminary design review (PDR), we complete that event; if they convince us they are ready for critical design review (CDR), then that is fine. Or if they are not ready in any review, they don’t go into the next event until it’s satisfactory.” While the review process is not contractual, it appears to strike a balance between the U.S. cost-plus “stay in their knickers” approach and the “hands-off” British TSPR system. In the DJPM’s view, it puts the government in a better position to help the contractor work through problems in early stages, “If you wait, you are going to create a wave that you can’t overcome.” Finally, according to the present U.S. DJPM, TSPR/FP contracting, combined with IPT management, is saving enormous program office resource costs.

## **MANAGEMENT CONTINUITY**

**Lesson:** The complexity of managing Section 27 codevelopment programs, along with the benefits of preserving established international personal relationships, requires that decision makers establish and maintain a management structure that provides management continuity and overlaps systemic personnel rotation.

**Rationale:** When the first U.S. DJPM was notified of his reassignment, the U.K. team was worried about the impact of losing such a strong player on short notice. They stated their concerns, and were relieved knowing that the contractor technical director would be the “glue” person to hold the U.S. side together during the transition. They claim his technical expertise and personality were critical in the U.S. DJPM transitions. The founding U.K. program manager stated that, “The contractor

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management support key players have been providing the continuity that the majors and lieutenant colonels haven’t been able to provide. That was important. It couldn’t have happened without that continuity.” According to him, the British have an ambition that their program managers should stay about three or four years minimum.

This concern relates to contractor as well as military management. Regarding Northrop’s management turnover, the senior U.K. interviewee stated that the present management is very good, but “nevertheless the continuing change of

personalities within the company is not very reassuring and we continually have to watch that.”

### CONTRACTOR PROGRAM MANAGEMENT SUPPORT

**Lesson:** When structuring and maintaining an international program office, contractor management support provides the program manager choices in tailoring, flexibility, and continuity not available in an all-government solution.

**Rationale:** Contractor-provided management support was vital to forming and maintaining the U.S. JPO; the government billets and technical expertise were not available during program formation. The USSOCOM AE commented that “we used

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to have a very large laboratory structure that provided us in-house expertise, but that’s going away. We have to hire contractors that have the in-depth ex-

pertise. It’s sensible to hire technical support in today’s downsizing environment.” The first DJPM relied on Systems Engineering and Technical Assistance (SETA) support because, “You need a core of civilians that can maintain continuity across the program.” The present DJPM maintains that through contractor-provided management support: Taxpayers get a break in that programs do not have to carry inappropriate personnel; the contractor selection process tends to attract and maintain the best people; and the JPO tends to exhibit greater teamwork among functional areas through contractor personnel.

### IPT MANAGEMENT

**Lesson:** A controlled IPT process is essential to effectively managing a complex and geographically scattered Section 27 program.

**Rationale:** Before implementing IPT management, the U.S. DJPM was having significant problems integrating and controlling his extended acquisition organization. The program office was small, with support staff and stakeholder organizations scattered globally. Support organization staff were communicating and deciding among themselves, without including the JPO in the loop. The IPT process sharply reduced those control problems and brought a spirit of teamwork and accomplishment to the DIRCM program. Also, according to a U.K. interviewee, “Cutting down meeting participation (through the USSOCOM’s use of IPTs outside of normal joint U.S./U.K. meetings) helps because one of the problems that we had, certainly early on, was at each meeting there would be somebody new who really knew very little about the program and what had gone on in the past. And they’d start asking the questions that were addressed 2 or 3 months ago. It was always as if we had to bring them up to speed before the meeting could proceed.”

A DJPM interviewee made these recommendations for creating IPTs:

- Ensure top-level support through review and signature on the IPT charter.
- Get the right disciplines and individuals on the team; include industry. As the IPT leader, the DJPM manages membership and participation.

- Manage the meetings and keep them focused. Do not allow old issues to be reopened if they have already been closed by mutual agreement.
- Keep the meetings on track to preclude the waste of time.
- Only address the highlights of each functional area/topic.
- Encourage the functional representatives to create their own mini sub-IPTs, working the details in them rather than bringing detailed technical issues to the overall IPT forum.

## **LEADERSHIP**

**Lesson:** Involved and decisive leadership, from the top down, is particularly essential to a Section 27 program.

**Rationale:** In the early days of forming the partnership with the United Kingdom, indecisiveness on the part of the U.S. leadership would most likely have resulted in failure. An industry interviewee observed this of the program, “A key element in making the program work was a leader that was involved, that was willing to make a decision and move forward. We had good examples with the first DJMP and the AE, up front making a decision and going ahead and doing something rather than sitting around trying to figure out the best way to do things. They fought it out, made a decision, and moved on. That was critical, to have a decision maker who made a decision and pushed hard.”

## **CONCLUSIONS**

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### **GROWTH OF RELATED COOPERATIVE VENTURES**

The evidence indicates, in general, that the two-country team has fostered strong relationships based on technical expertise and trust, plus both countries had something to offer the other. The payoff to both has been additional cooperative efforts.

To date the U.S. JPO has negotiated and signed an MOU amendment to further cooperate with the U.K. MoD on an advanced Missile Warning System (MWS) technology assessment program. Work under this MOU amendment may yield technology that could be used in the planned upgrade program for the baseline DIRCM missile warning sensor.

Further, the U.S. JPO is in the final stages of negotiating another MOU amendment to cooperate on a laser technology assessment program. As with the advanced MWS, technology developed here could be transitioned into the planned upgrade to add a laser-based countermeasure.

“The evidence indicates, in general, that the two-country team has fostered strong relationships based on technical expertise and trust, plus both countries had something to offer the other.”

### **LESSONS LEARNED**

The DIRCM program was researched so that future international cooperative acquisitions may directly benefit from it's experiences. Each of the 29 people interviewed for the study offered lessons pertinent to their areas of interest, the more important of which are summarized above.

The lessons that the majority of interviewees agree on collectively are synopsized below to aid the reader looking for this article's "bottom line" of successful international collaboration. Programmatic conclusions follow.

- Each side must strongly desire to achieve the same well-defined, focused requirement while being able to offer some technical benefit to the other side. In general, if one or more of the MOU participants appear to have little or no technological benefit to offer the remaining participant(s), the mismatch, real or perceived, will not allow the cooperative effort to get off the ground.
- Each side must dedicate an enormous effort to understand the culture, motivations, and idiosyncrasies of the people and bureaucracies of the other country.
- Strong personalities and technical competence are essential in the initial contact and management teams.
- International cooperative programs can achieve increased synergistic results if the managers take care to staff their technical teams to complement, rather than mirror, each other.
- When a junior partner, the U.S. side must be prepared to accept a subordinate management role. We note an overall theme that emerged from D'Agostino's (1996) research "for success in multinational programs that have been well-selected, national political issues and pride need to be subordinated to what is best for the program."
- Precoordinate contract technical and testing terms, conditions, and standards among all involved agencies.
- U.S. DJPMs should plan, as much as possible, on conducting their side of the program consistent with the DoD 5000 Series, even though a Section 27 "Quayle" Authority program may be conducted in accordance with the other country's laws and acquisition procedures. This approach will pay off in the short and long term by providing the required information in a familiar format to the appropriate staff agencies.
- The U.S. acquisition system has experienced a revolution through recent acquisition reform initiatives. However, U.S. personnel should avoid the tendency to see their acquisition system as superior to all others. It is working under a unique set of circumstances, statutes, industry capabilities, and congressional oversight.
- Make effective use of priced production and sustainment options during the competition. The United Kingdom awarded development and production together, giving up significant leverage in the process.
- Look closely at manning decisions when creating program offices. Each country's program office should have a representative from the other country. Consideration should be given to prime contractors and major test facility locations when making final manning decisions.

## PROGRAMMATIC CONCLUSIONS

While the DIRCM program has enjoyed noteworthy success in its Section 27 “Quayle” Authority environment to date, the interviews hint that not all has been smooth and trouble-free—the program experiences its share of technical problems. The evidence suggests that DIRCM was acknowledged and formulated as a high-performance and schedule-risk program. Urgent warfighter need for infrared missile protection by USSOCOM and U.K. MoD aviation units dictated a truncated, perhaps ambitious acquisition schedule. That schedule appears to amplify technical problems which may otherwise be classified as typical of an acquisition program at this stage.

Untypical, however, is the teamwork approach of the program’s people in anticipating emerging problems and wrestling them through to resolution. Teamwork and a program-office-wide work ethic—the desire to succeed and achieve—led us to examine perhaps the central reason for the program’s success: organizational character. We thought future international cooperative program managers might be interested in this notion when establishing their program offices.

In our view, the program’s originators established a core ideology (values and purpose) that has been foundational to DIRCM’s success in its unique, relatively complex, Section 27 environment. According to Collins and Porras (1996), core ideology—defined as the enduring character of an organization—is the most lasting and significant contribution of those who build visionary organizations. Core ideology provides the glue, the consistent identity, that holds an organization together through time. Core ideology is not

intentionally created or set; one discovers core ideology. In their model, core ideology has two distinct parts: core values, a system of guiding principles and tenets; and core purpose, the organization’s most fundamental reason for existence.

In the case of DIRCM, core *value* is the program organization’s spirit or culture of teamwork. The teamwork culture was started by the OSD, U.K. MoD, AFSOC, and USSOCOM founders—who were determined to work and succeed together as a team—and continues in the program today. With few

exceptions, members of the DIRCM team have put teamwork above any company, Service, promotion, or other paro-

chial interest. The evidence suggests that without the teamwork spirit at its core, the organization would not have successfully expanded, through IPT management, to involve the many geographically and functionally scattered stakeholders.

Core *purpose*, DIRCM’s most fundamental reason for existence, is urgent warfighter protection. Purpose, not to be confused with programmatic goals or strategies, is the vision of a light beam defeating an enemy missile seconds out from destroying an aircraft and its crew. With its roots mainly in the memory of a Special Operations aircraft downed in the Gulf War, purpose has held the organization’s key members together through several disruptive and divisive business and government reorganizations. There are no indicators it will abate prior to fielding and sustainment.

“Core ideology provides the glue, the consistent identity, that holds an organization together through time.”



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